



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,566	05/08/2001	Charles A. Miller	P147-US	3229

7590 11/21/2003

PARSONS, BEHLE & LATIMER
201 SOUTH MAIN STREET, SUITE 1800
SALT LAKE, UT 84145-0898

EXAMINER

LEE, BENNY T

ART UNIT	PAPER NUMBER
----------	--------------

2817

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
09/851,566			

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED:

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 21 Aug 2003 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire Three (3) month(s), _____ day(s) from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449 | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474 | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 2-7, 9-25, 37-39, 43-59 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☒ Claims 8, 26-36, 40-42 have been cancelled.
3. ☒ Claims 6 are allowed.
4. ☒ Claims 2, 43, 5, 9, 12-25, 37, 47, 38, 39, 48-54, 58 are rejected.
5. ☒ Claims 44, 3, 4, 7, 10, 11, 45, 46, 55-57, 59 are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. These drawings are: ☐ acceptable;
☐ not acceptable (see explanation).
10. ☒ The ☒ proposed drawing correction and/or the ☒ proposed additional or substitute sheet(s) of drawings, filed on 21 Aug 2003, has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☒ The proposed drawing correction, filed 21 Aug 2003, has been ☒ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections **MUST** be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

Art Unit: 2817

Applicants' cancellation of the non-elected claims renders moot the restriction requirement.

The disclosure is objected to because of the following informalities: Page 2, in the subheading, note that "Brief" should be deleted as being unnecessary. Page 4, paragraph 0007, note that "17a-17c" should be rewritten as --17a, 17b, 17c-- for consistency with the drawing figures. Page 6, paragraph 0012, 13th line, note that --as shown in Fig. 4-- should follow "scheme" for clarity. Page 7, paragraph 0016, line 8, note that --(see Figs. 1, 4)-- should follow "29" for consistency with the drawing figures. Page 8, paragraph 0018, first line, "Modulated" should be rewritten as --As shown in Fig. 1, modulated-- and in the second line, "one" should be rewritten as --electromagnetic coupler 18(1) of -- for clarity. Page 10, paragraph 0026, 5th line, note that "Data" should be rewritten as --In Fig. 6a, data-- for consistency with the drawing figure. Page 12, paragraph 0030, second and 8th lines, note that "through" should be rewritten as --14(2), 14(3), 14(4), 14(5), 14(6), 14(7)-- and --18(2), 18(3), 18(4), 18(5), 18(6), 18(7)--, respectively. Page 15, paragraph 0039, 8th and 9th lines, note that a --,-- after "protocols" and --:-- should follow "limitation". Page 17, in the formula, note that the parameters in the formula need to be strictly defined. Page 18, note that the remainder of paragraph 0044, the entirety of paragraph 0045 and the start of paragraph 0046 appear to be missing from the specification. Page 20, replacement paragraph 0055, note that "62(1)-(x)" should be rewritten as --62(1)-62(x) --. Page 21, paragraph 0056, note that reference to "Figure 6" needs to be clarified (i.e. Fig. 6a or Fig. 6b?). Pages 24, paragraphs 0064, note that "integrated circuit 90" still appears to be

Art Unit: 2817

inconsistent with the earlier use as "transmission line 90" and --(I/O)-- should precede "interface 64". Page 26, paragraph 0068, 5th line and 16th, 17th lines, note that "112(1)-112(3)" and "118(1)-118(3)" should be rewritten as --112(1), 112(2), 112(3)-- and --118(1), 118(2), 118(3)--, respectively. Page 26, paragraph 0069, 5th and 9th lines, note that "resonate" should correctly read as --of integrated circuits 112(1) - 112(3)--, respectively. Page 30, paragraph 0079, first line, note that "17a to 17c" should properly be --17a, 17b, 17c--. Page 31, paragraph 0080, 7th and 8th lines, note that in the sequence of reference numbers, appropriate reference numbers should correspond to the drawing in which they appear (e.g. "601, 602" appears in --Fig. 17a--, etc). Page 31, paragraph 0081, note that "Figures 1-17c" should be rewritten such as to be inclusive of each drawing figure. Page 32, paragraph 0082, 11th line, note that --depicted in fig. 18-- should follow "406" for clarity. Appropriate correction is required.

The disclosure is objected to because of the following informalities: Note that use of generic reference numerals (e.g. 14, 18, 60, 90, 112, 118, etc) would not be appropriate to those drawing figures which use the --(1)...(x)-- designations. Moreover, applicant should review the description of each drawing figure to ensure that all labeled elements/features are commensurately described for each drawing figure. Appropriate correction is required.

The drawings are objected to because of the following: In fig. 3, reference label "40" appears to have been improperly used to depict different elements/features; In fig. 5, reference labels-- (14(x), 18)-- need to be provided as per the specification description of Fig. 5; In fig. 9, reference labels --(62(1) - 62(x), 68)-- need to be provided as per the specification description of

Art Unit: 2817

Fig. 9, 10; In fig. 15, reference labels --(112, 118)-- need to be provided as per the specification.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claims 51-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 51, 52, note that "said electromagnetic couplers" is not definite since only a single "electromagnetic coupler" is recited in independent claim 48, from which these claims depend.

The following claims have been found objectionable for reasons set forth below:

In claim 6, third paragraph; claim 43, line 2; claim 54, line 2: note that "an" should be rewritten as --a respective-- at each instance..

In claims 37, 38, last paragraph of each claim, note that "means each" should be rephrased as --means, each coupling means-- for a proper characterization.

In claims 39, 47, note that --plurality of-- should precede "electronic components" and --respective-- should precede "integrated circuit".

In claims 43, 54, last line of each claim, note that --corresponding-- should precede "electronic component"

Art Unit: 2817

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(c) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIA (pre-AIA 35 U.S.C. 102(e)).

Claims 2, 43, 5, 9, 12-21, 23-25; 37, 47; 38, 39; 48-54, 58 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Nagata et al.

Nagata et al (Fig. 1) discloses an electronic system including: one or more passive transmission lines (7a, 7, 7b); one or more “electronic components” or integrated circuit chips (5, 5'). The integrated circuit chips (5, 5') include a respective non-contact electromagnetic coupler comprised of respective internal lines (e.g. 6, 6') associated with a corresponding integrated circuit chip (5, 5') and a respective coupling slot (9). Note that the integrated circuit chips (5, 5') provide signals to thus “drive” the internal lines (6, 6') and in conjunction with the coupling slot (9) provides electromagnetic coupling between the one or more integrated circuit

Art Unit: 2817

chips and the transmission lines. Moreover, note that a “shielding material” comprises closures (3, 3') electrically connected to one or more conductor layers (10) which in turn are grounded through conductive vias (11) to ground layer (8) to provide in part partial shielding of the transmission lines. Moreover, the grounded conductive layers (10) are associated with and are spaced from corresponding internal lines (6, 6') by respective gaps and thus this shielding material (including conductive layer 10) is disposed “between” the electronic components and the “electromagnetic coupler” (i.e. including slot 9). Note that the one or more transmission lines (7a, 7, 7b) and the one or more integrated circuit chips (5, 5') may be disposed on the same substrate (i.e. Fig. 1) or alternatively are disposed on separate substrates (i.e. see Fig. 3, where transmission lines 7 are disposed on separate substrate 13). Furthermore, as shown in the alternate embodiment of Fig. 4, the electronic components are comprised of a first circuit board coupled to a second circuit board comprising the coupling slots (9) and the transmission lines (7). Additionally, it should be noted that ground layer (8) inherently functions as an at least partial shielding layer for and between the one or more transmission lines (7a, 7, 7b).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagata et al.

Art Unit: 2817

Nagata et al discloses the claimed invention except that it does not disclose that the electromagnetic coupler is spaced from the transmission line by a distance of ten (10) millimeters.

Thus, it would have been obvious to have optimized such a spacing to have been ten (10) millimeters, especially given the general high frequency conditions (i.e. frequencies greater than 40 Ghz) for the electronic system of Nagata et al would have been consistent with spacing dimensions such as ten (10) millimeters, thereby suggesting the obviousness of such a optimization.

Applicant's arguments with respect to claims 2-5, 7, 10-15, 18-20, 23-25, 36, 39 have been considered but are moot in view of the new ground(s) of rejection.

Claims 44, 3, 4, 7, 10, 11; 45; 46; 55-57, 59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 6 is allowable over the closest prior art of record to Nagata et al in that the claimed limitations that the electromagnetic coupler has at least 10dB of attenuation and is smaller than the integrated circuit is not disclosed therein and thus distinguishes over the Nagata et al reference.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 308-4902.


BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817